

**AMENDMENTS TO THE CLAIMS:**

(1) Please amend claims 1, 2, 50, and 55-74.

(2) Please cancel claims 9-47.

(3) Please withdraw claims 75-83 without prejudice or disclaimer of the subject matter thereof.

Claim 1 (Currently amended): A composition for protecting brain cells or improving memory; said composition comprising;

an extract of *Liriopsis tuber* from about 50 to 500 mg; and  
a-at least one pharmaceutically acceptable carrier ~~selected from the group consisting of lactose, dextrose, sucrose, sorbitol, mannitol, xylitol, erythritol, maltitol, starch, isomerized sugar, sugar, acacia gum, alginate, gelatin, calcium phosphate, calcium silicate, cellulose, methyl cellulose, microcrystalline cellulose, polyvinylpyrrolidone, purified water, distilled water, methylhydroxybenzoate, propylhydroxybenzoate, paraoxybenzoate, methylparaoxybenzoate, paraoxypropylbenzoate, talc, magnesium stearate, and mineral oil.~~ said pharmaceutically acceptable carrier is talc from about 0.5 to 5.0 mg. and lactose from about 50 to 500 mg.

Claim 2 (Currently amended): The composition of claim 1, wherein said pharmaceutically acceptable carrier further comprising magnesium stearate from 0.1 to 1.0 mg. wherein the content of the extract of *Liriopsis tuber* is 0.5-50% by weight based on the total weight of the composition.

Claim 3 (Original): The composition of claim 1, wherein the extract of *Liriopsis tuber* is obtained by extracting with a solvent selected from the group consisting of C1-4 lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate.

Claim 4 (Original): The composition of claim 3, wherein the extract of *Liriopsis tuber* is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform.

Claim 5 (Original): The composition of claim 3, wherein the extract of *Liriopsis tuber* is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of *Liriopsis tuber* from the methanol soluble fraction.

Claim 6 (Original): The composition of claim 3, wherein the extract of *Liriopsis tuber* is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of *Liriopsis tuber* from the methanol insoluble fraction.

Claim 7 (Previously presented): The composition of claim 1, wherein said composition further comprises an additive selected from the group consisting of natural carbohydrates, flavors, nutrients, vitamins, mineral (electrolytes), synthetic seasonings, natural seasonings, coloring agents, fillers, pectic acid and its salt, alginic acid and its salt, organic acids, protective colloidal thickeners, pH regulating agents, stabilizers, preservatives, antioxidants, glycerin, alcohols, carbonizing agents, and sarcocarp.

Claim 8 (Previously presented): The composition of claim 1, wherein the composition is formulated into an administration form selected from the group consisting of an oral administration, topical applications, suppositories, and sterile injections.

Claims 9-47 (Cancelled).

Claim 48 (Previously presented): The composition of claim 7 further comprising a beverage, and wherein the content of the extract of *Liriopsis tuber* is 1-30 g per 100 ml of said beverage.

Claim 49 (Previously presented): The composition of claim 7 further comprising a food product, and wherein the content of the extract of *Liriopsis tuber* is 0.1 to 15% by weight based on the total weight of said food product.

Claim 50 (Currently amended): The composition of claim 1, ~~wherein said carrier is lactose, talc, and magnesium stearate wherein said extract of *Liriopsis tuber* is 3 w/w% by weight based on the total weight of said composition (w/w%), and further comprising brown rice 30 w/w%, job's tear 15 w/w%, barley 20 w/w%, glutinous rice 9 w/w%, perilla japonica 7 w/w%, black bean 8 w/w%, black sesame 7 w/w%, ganoderma lucidum (FR) karst 0.5 w/w%, and rehmannia glutinosa 0.5 w/w%.~~

Claim 51 (Previously presented): The composition of claim 3, wherein said carrier is about 500.0mg of lactose, about 5.0mg of talc, and about 1.0mg of magnesium stearate, and wherein said *Liriopsis tuber* extract is about 500.0mg.

Claim 52 (Previously presented): The composition of claim 4, wherein said carrier is about 50.0mg of lactose, about 0.5mg of talc, and about 0.1mg of magnesium stearate, and wherein said *Liriopsis tuber* extract is about 50.0mg.

Claim 53 (Previously presented): The composition of claim 5, wherein said carrier is about 50.0mg of lactose, about 0.5mg of talc, and about 0.1mg of magnesium stearate, and wherein said *Liriopsis tuber* extract is about 50.0mg.

Claim 54 (Previously presented): The composition of claim 6, wherein said carrier is about 50.0mg of lactose, about 0.5mg of talc, and about 0.1mg of magnesium stearate, and wherein said *Liriopsis tuber* extract is about 50.0mg.

Claim 55 (Currently amended): ~~The A composition for protecting brain cells or improving memory; said composition comprising:~~ of claim 1, wherein said carrier is starch, and magnesium stearate.

an extract of *Liriopsis tuber* from about 50 to 500 mg; and  
at least one pharmaceutically acceptable carrier, said pharmaceutically acceptable carrier is starch from about 1.0 to 10 mg and magnesium stearate from about 10 to 100 mg.

Claim 56 (Currently amended): The composition of claim [[3]]55, wherein said extract of *Liriopsis tuber* is obtained by extracting with a solvent selected from the group consisting of C1-4 lower alcohols or a mixture of said lower alcohols and water, acetone,

chloroform, methylene chloride, ether and ethyl acetate, and said carrier is about 10.0mg of starch, and about 100.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 500.0mg.

Claim 57 (Currently amended): The composition of claim [[4]]55, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of CI-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform, and said carrier is about 1.0mg of starch, and about 10.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 58 (Currently amended): The composition of claim [[5]]55, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of CI-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol soluble fraction, and said carrier is about 1.0mg of starch, and about 10.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 59 (Currently amended): The composition of claim [[6]]55, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of CI-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol insoluble fraction, and said carrier is about 1.0mg of starch,

and about 10.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 60 (Currently amended): The A composition for protecting brain cells or improving memory; said composition comprising: of claim 1, wherein said carrier is sugar, paraoxybenzoate, paraoxypropylbenzoate, and purified water; an extract of Liriopsis tuber from about 5.0 to 50 mg; and at least one pharmaceutically acceptable carrier, said pharmaceutically acceptable carrier is about 95.1 g of sugar, about 80 mg of Paraoxybenzoate, about 16 mg Paraoxypropylbenzoate, and about 150 ml of purified water.

Claim 61 (Currently amended): The composition of claim [[3]]60, wherein said extract of Liriopsis tuber is obtained by extracting with a solvent selected from the group consisting of C1-4 lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate, and said carrier is about 95.1g of sugar, about 80.0mg of paraoxybenzoate, about 16.0mg of paraoxypropylbenzoate, and to about 150ml of purified water, and wherein said Liriopsis tuber extract is about 5.0g.

Claim 62 (Currently amended): The composition of claim [[4]]60, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform, and said carrier is about 95.1g of sugar, about 80.0mg of paraoxybenzoate, about 16.0mg of paraoxypropylbenzoate, and to about 150ml of purified water, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 63 (Currently amended): The composition of claim [[5]]60, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol

insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol soluble fraction, and said carrier is about 95.1g of sugar, about 80.0mg of paraoxybenzoate, about 16.0mg of paraoxypropylbenzoate, and to about 150ml of purified water, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 64 (Currently amended): The composition of claim [[6]]60, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol insoluble fraction, and said carrier is about 95.1g of sugar, about 80.0mg of paraoxybenzoate, about 16.0mg of paraoxypropylbenzoate, and to about 150ml of purified water, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 65 (Currently amended): The A composition for protecting brain cells or improving memory; said composition comprising; of claim 1, wherein said carrier is isomerized sugar, methylparaoxybenzoate, and purified water, and further comprising an antioxidant.

an extract of Liriopsis tuber from about 50 to 500 mg; and  
at least one pharmaceutically acceptable carrier, said pharmaceutically  
acceptable carrier is about 20 g of isomerized sugar, 5.0 mg of  
antioxidant, 2.0 mg of methylparaoxybenzoate, and about 100 ml of  
purified water

Claim 66 (Currently amended): The composition of claim [[3]]65, wherein said extract of Liriopsis tuber is obtained by extracting with a solvent selected from the group consisting of C1-4 lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate, and said carrier is about 20.0g of isomerized sugar, about 2.0mg of methylparaoxybenzoate, and to about 100.0ml of purified water, wherein said Liriopsis tuber extract is about 500.0mg, and further comprising about 5.0mg of an antioxidant.

Claim 67 (Currently amended): The composition of claim [[4]]65, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform, and said carrier is about 20.0g of isomerized sugar, about 2.0mg of methylparaoxybenzoate, and to about 100.0ml of purified water, wherein said Liriopsis tuber extract is about 500.0mg, and further comprising about 5.0mg of an antioxidant.

Claim 68 (Currently amended): The composition of claim [[5]]65, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol soluble fraction, and said carrier is about 20.0g of isomerized sugar, about 2.0mg of methylparaoxybenzoate, and to about 100.0ml of purified water, wherein said Liriopsis tuber extract is about 500.0mg, and further comprising about 5.0mg of an antioxidant.

Claim 69 (Currently amended): The composition of claim [[6]]65, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol insoluble fraction, and said carrier is about 20.0g of isomerized sugar, about 2.0mg of methylparaoxybenzoate, and to about 100.0ml of purified water,

wherein said Liriopsis tuber extract is about 500.0mg, and further comprising about 5.0mg of an antioxidant.

Claim 70 (Currently amended): The A composition for protecting brain cells or improving memory; said composition comprising; of claim 1, wherein said carrier is distilled water, and further comprising an antioxidant and Tween 80:

an extract of Liriopsis tuber from about 5.0 to 50 mg; and

at least one pharmaceutically acceptable carrier, said pharmaceutically

acceptable carrier is about 1.0 mg of antioxidant, 1.0 mg of Tween 80, and 2.0 ml of distilled water.

Claim 71 (Currently amended): The composition of claim [[3]]70, wherein said extract of Liriopsis tuber is obtained by extracting with a solvent selected from the group consisting of C1-4 lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate, and said carrier is about 2.0ml of distilled water, wherein said Liriopsis tuber extract is about 50.0mg, and further comprising about 1.0mg of an antioxidant and about 1.0mg of Tween 80.

Claim 72 (Currently amended): The composition of claim [[4]]70, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform, and said carrier is about 2.0ml of distilled water, wherein said Liriopsis tuber extract is about 50.0mg, and further comprising about 1.0mg of an antioxidant and about 1.0mg of Tween 80.

Claim 73 (Currently amended): The composition of claim [[5]]70, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol soluble fraction, and said carrier is about 2.0ml of distilled



~~water, wherein said Liriopsis tuber extract is about 50.0mg, and further comprising about 1.0mg of an antioxidant and about 1.0mg of Tween 80.~~

Claim 74 (Currently amended): The composition of claim ~~[[6]]~~70, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of CI-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol insoluble fraction, and said carrier is about 2.0ml of distilled water, wherein said Liriopsis tuber extract is about 50.0mg, and further comprising about 1.0mg of an antioxidant and about 1.0mg of Tween 80.

Claim 75 (Withdrawn): A method for protecting brain cells against damage caused by excitatory amino acids and oxidative stress in a mammal comprising administering to said mammal a therapeutic amount of an extract of Liriopsis tuber of claim 3, wherein said extract of Liriopsis tuber is administered in an amount of from 0.1mg/kg to 500mg/kg, and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

Claim 76 (Withdrawn): A method for inhibiting AMPA-induced depolarization of a neuronal cell of a mammal comprising administering to said mammal a therapeutic amount of an extract of Liriopsis tuber of claim 3, wherein said extract of Liriopsis tuber is administered in an amount of from 0.1mg/kg to 500mg/kg and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

Claim 77 (Withdrawn): A method of facilitating tyrosine phosphorylation of a hippocampal protein of a mammal comprising administering to said mammal a therapeutic amount of an extract of Liriopsis tuber of claim 3, wherein said extract of Liriopsis tuber is administered in an amount of from 0.1mg/kg to 500mg/kg and wherein

said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

Claim 78 (Withdrawn): The method of claim 77, wherein said hippocampal protein comprises an insulin receptor.

Claim 79 (Withdrawn): The method as of claim 77, wherein said hippocampal protein comprises ERKs (extracellular-signal regulated kinases).

Claim 80 (Withdrawn): A method of inhibiting cholinesterase activity in the brain of a mammal comprising administering to said mammal a therapeutic amount of an extract of Liriopsis tuber of claim 3, wherein said extract of Liriopsis tuber is administered in an amount of from 0.1mg/kg to 500mg/kg and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

Claim 81 (Withdrawn): A method of treating neurodegenerative diseases of a mammal comprising administering a medicament to said mammal, wherein said medicament prepared with an extract of Liriopsis tuber of claim 3.

Claim 82 (Withdrawn): A method of preventing or treating dementia of a mammal comprising administering a medicament to said mammal, wherein said medicament prepared with an extract of Liriopsis tuber of claim 3.

Claim 83 (Withdrawn): A method of improving memory of a mammal comprising administering a medicament to said mammal, wherein said medicament prepared with an extract of Liriopsis tuber of claim 3.